

SYSTEM AND METHOD FOR MANAGING FLOW BANDWIDTH UTILIZATION IN A PACKET COMMUNICATION ENVIRONMENT

ABSTRACT

To manage the bandwidth of a network, a novel rate control scheme, Time-Division-Queue Rate Control Scheme (TDQ-RCS), is provided. The TDQ-RCS according to the present invention can rapidly determine departure time of an arrival packet, add the arrival packet into the time division queue to which it belongs according to the departure time, and then output the packet on schedule. All algorithms employed by the TDQ-RCS can be completed in a constant time since these algorithms are simple for the arrival packets of different sizes. Especially, the TDQ-RCS neither generates any dummy packet nor wastes any bandwidth but still can accomplish the bandwidth management. Therefore, the present invention significantly accomplishes the bandwidth management of a network without generating any dummy packet and wasting the bandwidth.

(Fig. 3)